

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF HAWAII

UNITED STATES OF AMERICA,

Plaintiff,

vs.

DEREK HAHN (3),

Defendant.

CR. NO. 17-00582 JMS-RLP

ORDER DENYING DEFENDANT
DEREK HAHN'S MOTION IN
LIMINE TO EXCLUDE EXPERT
TESTIMONY, ECF NO. 382

**ORDER DENYING DEFENDANT DEREK HAHN'S MOTION
IN LIMINE TO EXCLUDE EXPERT TESTIMONY, ECF NO. 382**

Defendant Derek Hahn ("Hahn") seeks an order in limine excluding FBI Supervisory Special Agent Edwin Nam ("Nam") from testifying as an expert witness regarding historical cell-site data pursuant to Federal Rule of Criminal Procedure 16 and *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993) ("*Daubert I*"). On March 13, 2019, the court held an evidentiary hearing, with Nam as the sole witness. For the following reasons, the motion is DENIED.

I. BACKGROUND

During the government's investigation, a warrant was issued to Sprint Communications for Hahn's cellular telephone records. Both parties agree that the Sprint records captured the phone's voice calls and text messaging transactional data, including the particular cellular tower that the phone accessed when voice

calls and/or text messages were sent or received. It is also undisputed that the towers at issue in this case used approximate 120-degree sectors (sometimes called “faces”) to provide 360 degrees of coverage per tower. The Sprint records capture not only the tower used, but also the particular sector that connected at a particular time.

Nam,¹ a supervisor at the FBI’s cellular analysis survey team, testified that for each voice call or text message sent or received, the phone selects the tower that provides the best signal at that time.² The best signal, in turn, is determined by signal strength and signal quality. Nam was likewise clear that a cell phone does not always or necessarily utilize the nearest tower; instead it assesses its environment and uses the tower with the best signal. For example, he explained that in a perfectly flat area with no obstructions, the tower with the best signal would be the nearest to the cell phone. But various factors can impact which tower offers the best signal, including obstructions and topography.

Based on this explanation, Nam testified that once he has identified a specific Sprint tower and its sector that was used on a specific date and time, he cannot conclude specifically where the phone was located, but can testify that it

¹ Nam has been qualified as an expert in the field of historical cell site analysis fifteen times, all in state courts in California and Hawaii.

² Defendant does not challenge Nam’s qualifications as an expert. Regardless, the court finds Nam qualified to testify as an expert in historical cell site data.

was used within the coverage area of that specific tower's sector. Finally, he explained that the coverage area for each tower is unique, and that he did not measure the coverage area for each tower identified in this case.

II. ANALYSIS

A. Federal Rule of Criminal Procedure 16

Hahn first contends that the government failed to comply with its discovery requirements under Federal Rule of Criminal Procedure 16 ("Rule 16"). The court disagrees.

Rule 16 requires the government to provide the defense with "a written summary" of the testimony it expects to adduce from an expert witness and that summary must "describe the witness's opinions, the bases and reasons for those opinions, and the witness's qualifications." Rule 16(a)(1)(G). If the government fails to comply, the court has several options — permit discovery; grant a continuance; "prohibit that party from introducing the undisclosed evidence;" or "enter any other order that is just under the circumstances." Rule 16(d)(2).

The government complied with Rule 16. Its February 9, 2019 disclosure contained Nam's curriculum vitae, a separate written summary of Nam's qualifications, Nam's opinions, and an explanation of how he reached his opinions. ECF No. 382-2. Specifically, the government disclosed that Nam

obtained the cell phone records for Hahn's telephone, and those records documented the cell towers and cell sectors that serviced that phone. Nam explained that mapping software was used using the latitude/longitude of the cell tower coordinates provided by the service provider, and the "cell sites associated with the target cell phone were located using the mapping software and the plotted cell site data." *Id.* at PageID #8 of 15. Nam also explained that "the call detail records and a list of cell site locations were analyzed to illustrate an approximate location of the target cell phone when it initiated contact with the network." *Id.* Finally, the government's disclosure included several historical cell site analysis maps. No further disclosure was required.³

B. Federal Rule of Evidence 702

Next, Hahn seeks to exclude Nam's expert testimony pursuant to *Daubert I*.

Federal Rule of Evidence 702 provides:

A witness who is qualified as an expert by knowledge, skill, experience, training, or education, may testify in the form of an opinion or otherwise if: (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue; (b) the testimony is based on sufficient facts or data; (c) the testimony is the product of

³ Further, Nam's testimony during the March 13, 2019 *Daubert* hearing provided Hahn with information well beyond that required by Rule 16. Thus, even if the initial disclosure was deficient, Hahn has suffered no prejudice and the court would not exclude Nam's testimony as a Rule 16 sanction. *See United States v. King*, 703 F. Supp. 2d 1063, 1077 (D. Haw. 2010).

reliable principles and methods; and (d) the expert has reliably applied the principles and methods to the facts of the case.

The court has the responsibility of acting as a gatekeeper to prevent unreliable expert testimony from reaching the jury. *Daubert I*, 509 U.S. at 589. In carrying out this responsibility, the court has discretion and flexibility in determining what evidence is relevant, reliable, and helpful to the trier of fact. *Cabrera v. Cordis Corp.*, 134 F.3d 1418, 1420 (9th Cir. 1998); *United States v. Cordoba*, 104 F.3d 225, 228 (9th Cir. 1997) (“District courts must strike the appropriate balance between admitting reliable, helpful expert testimony and excluding misleading or confusing testimony to achieve the flexible approach outlined in *Daubert*.”) (quoting *United States v. Rincon*, 28 F.3d 921, 926 (9th Cir. 1994)).

The Ninth Circuit has articulated a two-prong analysis for admissibility. First, the proffered testimony must be reliable, i.e., the expert’s testimony reflects scientific knowledge, the findings are derived by the scientific method, and the work product amounts to “good science.” *Daubert v. Merrell Dow Pharm.*, 43 F.3d 1311, 1315 (9th Cir. 1995) (“*Daubert II*”) (citation and

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quotation signals omitted). Second, the testimony must meet the “fit” requirement, i.e., “it logically advances a material aspect of the proposing party’s case.”⁴ *Id.*

For the reliability inquiry, the focus is on the expert’s “principles and methodology, not on the conclusions that they generate.” *Daubert I*, 509 U.S. at 595. “Scientific evidence is deemed reliable if the principles and methodology used by an expert are grounded in the methods of science.” *Clausen v. M/V New Carissa*, 339 F.3d 1049, 1056 (9th Cir. 2003); *see also Wendell v. GlaxoSmithKline LLC*, 858 F.3d 1227, 1232 (9th Cir. 2017). Accordingly, the expert’s methods must be adequately explained. *United States v. Hermanek*, 289 F.3d 1076, 1094 (9th Cir. 2002); *see also Daubert II*, 43 F.3d at 1319 (holding that the expert must “explain the methodology . . . followed to reach [his or her] conclusions”); *Rincon*, 28 F.3d at 924 (explaining that the methods used by the expert must be described “in sufficient detail” such that the district court can determine if they are reliable). “For scientific opinion, the court must assess the reasoning or methodology, using as appropriate such criteria as testability, publication in peer reviewed literature, and general acceptance, but the inquiry is a flexible one. Shaky but admissible evidence is to be attacked by cross examination, contrary evidence, and attention to the burden of proof, not

⁴ Hahn does not challenge the “fit” requirement, and the court agrees. If admitted, the Nam’s testimony would logically advance a material aspect of the government’s case.

exclusion.” *Primiano v. Cook*, 598 F.3d 558, 564 (9th Cir. 2010) (footnotes omitted); *see also Murray v. S. Route Mar. SA*, 870 F.3d 915, 925 (9th Cir. 2017).⁵

Applying this standard, courts have generally held that expert testimony relating to cell-site historical data is reliable. “District courts that have been called upon to decide whether to admit historical cell-site analysis have almost universally done so.” *United States v. Hill*, 818 F.3d 289, 297 (7th Cir. 2016) (citing cases); *see also United States v. Hitesman*, 2016 WL 3523854, at *9 (N.D. Cal. June 28, 2016) (stating that district courts within the Northern District of California have consistently found historical cell-site evidence admissible, provided that the evidence is offered to establish an individual’s general geographic location).

Historical cell-site analysis can show with sufficient reliability that a phone was in a general area, especially in a well-populated one. It shows the cell sites with which the person’s cell phone connected, and the science is well understood. . . . A mathematical error rate has not been calculated, but the technique has been subjected to publication and peer criticism, if not peer review. The advantages, drawbacks, confounds, and limitations of

⁵ The Supreme Court has listed non-exclusive factors to consider when determining whether to admit expert testimony under Rule 702. *See Daubert I*, 509 U.S. at 593-95. These include: “whether the theory or technique employed by the expert is generally accepted in the scientific community; whether it’s been subjected to peer review and publication; whether it can be and has been tested; and whether the known or potential rate of error is acceptable.” *Daubert II*, 43 F.3d at 1316. These are illustrative only, may not apply in every case, and are to be used flexibly. *Wendell*, 858 F.3d at 1232.

historical cell-site analysis are well known by experts in the law enforcement and academic communities.

Hill, 818 F.3d at 298 (internal citations omitted).

Hahn’s primary argument — that “the government has made an assumption that a cell phone must necessarily utilize the nearest tower” — is simply incorrect. Nam explained that a cell phone does not always or necessarily utilize the nearest tower. Instead, it uses the tower with the best signal. This leaves, then, the argument that Nam cannot testify as to the specific range of any particular tower in relation to specific geographic locations. But this argument goes to the weight, not the admissibility, of the testimony. *See Hill*, 818 F.3d at 298 (upholding expert historical cell site data where the expert failed to perform “any tests of that cell tower’s area of signal coverage” where the jury was made aware of the technique’s potential pitfalls); *United States v. Jones*, 918 F. Supp. 2d 1, 5 (D.D.C. 2013) (“Moreover, to the extent that Agent Eicher’s testimony relies on assumptions about the strength of the signal from a given cell tower, any challenges to those assumptions go to the weight of his testimony, not its reliability.”); *United States v. Howard*, 2017 WL 2662469, at *3 (C.D. Cal. June 19, 2017) (stating that the existence of factors affecting cell signal strength that an expert does not take into account goes to the weight, not admissibility, of the expert opinion); *see also United States v. Fama*, 2012 WL 6102700, at *4 (E.D.N.Y. Dec. 10, 2012); *United States v. Freeman*, 2015 WL 2062754, at *5

(E.D. Mich. May 4, 2015); *United States v. Allums*, 2009 WL 806748, at *2 (D. Utah Mar. 24, 2009).

While widely admitting expert testimony of historical cell-site location information, courts have also cautioned that the “admission of historical cell-site evidence that overpromises on the technique’s precision — or fails to account adequately for its potential flaws — may well be an abuse of discretion.” *Hill*, 818 F.3d at 299. *See also United States v. Machado-Erazo*, 901 F.3d 326, 337-38 (D.C. Cir. 2018). Based on his testimony during the *Daubert* hearing, the court determines that Nam will not cross this line. That is, Nam will not testify, for instance, that Hahn’s phone was at the Kealoha residence in Kahala at a specific time on the morning of June 22, 2013; instead, he will testify that Hahn’s phone connected to a tower, and the Kealoha home was within the particular sector of that tower.

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III. CONCLUSION

For the reasons stated above, Derek Hahn's Motion in Limine to Exclude Expert Testimony is DENIED.

DATED: Honolulu, Hawaii, March 18, 2018.



/s/ J. Michael Seabright
J. Michael Seabright
Chief United States District Judge

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